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(54) **ISOLATION OF SINGLE-WALLED CARBON NANOTUBES FROM DOUBLE AND MULTI-WALLED CARBON NANOTUBES**

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See application file for complete search history.

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(57) **ABSTRACT**

A method and system are disclosed for separating single-walled carbon nanotubes from double and multi-walled carbon nanotubes by using the difference in the buoyant density of Single-Walled versus Multi-Walled carbon nanotubes. In one embodiment, the method comprises providing a vessel with first and second solutions. The first solution comprises a quantity of carbon nanotubes, including single-walled carbon nanotubes and double and multi-walled carbon nanotubes. The single walled nanotubes have a first density, the double and multi-walled nanotubes having a second density. The second solution in the vessel has a third density between said first and second densities. The vessel is centrifuged to faun first and second layers in the vessel, with the second solution between said first and second layers. The single-walled carbon nanotubes are predominantly in the first layer, and the second and multi-walled carbon nanotubes are predominantly in the second layer.

6 Claims, 1 Drawing Sheet